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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,637	09/15/2003	Eadaoin Ledwidge	ICC-279	8008
31217	7590	05/22/2006	EXAMINER	
LOCTITE CORPORATION			SELLERS, ROBERT E	
1001 TROUT BROOK CROSSING			ART UNIT	
ROCKY HILL, CT 06067			PAPER NUMBER	

1712

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/661,637	Applicant(s) LEDWIDGE, EADAOIN	
	Examiner Robert Sellers	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006 and 13 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/29/03 & 2/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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Claims 21-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction requirement in the reply filed on February 15, 2005.

1. The election in the response filed April 13, 2006 of the species of DER (CAT 002, UCB) shown in Example 1 on page 18 of the specification as the opacifying component does not identify the chemical name and/or structure. Nowhere in the specification, particularly page 11, line 9 to page 12, line 6, is there any indication as to the chemical identity of the trade name.
2. The election of the presence of Blue 50 dye of claim 20 conflicts with the description on page 13, line 6 wherein it is categorized as an opacifying component.
3. The “[c]ycloaliphatic resin” exhibited on page 18, Example 1, line 3; Example 2, line 26 and page 19, Example 3, line 13 would be more accurately designated as a “cycloaliphatic epoxy resin” as corroborated by page 10, lines 8-12 of the specification.

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

4. It is unclear how the monofunctional C₄-C₂₈ alkyl glycidyl ethers, C₂-C₂₈ alkyl- and alkenyl-glycidyl esters and C₁-C₂₈ alkyl and mono-phenol glycidyl ethers listed on page 9, lines 10 and 12-14 of the specification and claim 7, lines 3-5 satisfy the claimed UV curable criterion since a monoglycidyl compound having only one epoxy group cannot form a cured product unless blended with a multifunctional epoxy resin.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 25 provides for the use of a composition. Since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

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6. Claim 25 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd. App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 10-14 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Montgomery et al. Publication No. 2003/0139487.

7. Montgomery et al. (page 9, Example 1, Composition C) shows a UV-curable composition useful as an adhesive (page 1, paragraph 3) cured preferably in under 15 seconds (page 9, paragraph 92) containing 41% by weight of a urethane acrylate oligomer, 7% by weight of dimethylacrylamide, 16.9% by weight of ethoxylated bisphenol A diacrylate, Crystal Violet Lactone (a suitable species of opacifying agent according to page 11, line 12 of the specification) 1% by weight of a cationic photoinitiator including the elected species of an iodonium salt providing “sufficient acid to react with the colorless dye, thereby cuasing the dye, and therefore the cured composition, to become colored (page 8, paragraphs 80 and 81),” and an adhesion promoter such as an aminosilane (page 4, paragraph 41).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14, 19, 20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Publication No. 03/46042, Reardon, Jr. Patent No. 4,343,885 and in view of Montgomery et al.

8. The PCT publication discloses composition curable with UV radiation in the range of from 280-650 nm (page 20, line 17) comprising from 30-80% by weight (page 8, lines 19-20) of an epoxy compound (page 2, lines 12-17) such as preferably the elected species of di(3,4-epoxycyclohexylmethyl)hexanedioate (page 8, lines 10-11), a cationic photoinitiator such as the elected species of an iodonium salt (page 8, line 30 and page 9, lines 8-23, formula I or II), a latent coloring component substantially a colorless dye precursor until irradiation (page 3, lines 6-12) including species deemed suitable on page 11, lines 11-23 of the specification (page 12, lines 26-33), a filler such as the elected species of silica (page 16, lines 10 and 13) and a silane coupling agent such as the elected species of γ -glycidoxypolytrimethoxy silane (i.e. Silquest 187).

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9. Reardon, Jr. (col. 2, lines 48-59) reports a photopolymerizable composition prepared from 30-50% by weight (col. 23 table) of an epoxy compound (col. 10, lines 43-54) such as bis[3,4-epoxy-6-methylcyclohexyl)methyl] adipate (col. 12, lines 34-36), a fluoran colorformer becoming more intensely colored upon contact with a color activator and a latent activator for the fluoran colorformer such as a diazonium salt (col. 17, lines 33-36), an adhesion promoter (col. 23, line 39), fillers and pigments (col. 24, lines 29-30).
10. The claimed adhesion promoter is disclosed but not exemplified. It would have been obvious to employ the γ -glycidoxypropyltrimethoxy silane of the PCT publication or the adhesion promoter of Reardon, Jr. in order "to enhance the adhesion of the cured composition to a substrate (Montgomery et al., page 3, paragraph 38).

Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference as applied to the claims hereinabove, and further in view of Grinevich et al. Patent No. 6,309,797.

11. Grinevich et al. (col. 4, lines 49-53)) espouses self-coloring photohardenable composition derived from 60 to 99% by weight (col. 8, lines 30-34) of an epoxy monomer (col. 5, lines 34-64), a color precursor, from 0.05 to 15% by weight an onium salt such as an iodonium salt which initiates polymerization and oxidizes the color precursor into its colored form (col. 4, lines 43-49), and from 0 to 10% by weight of a thioxanthone photoinitiator (col. 7, lines 19-21 and 25).

12. It would have been obvious to incorporate the thioxanthone of Grinevich et al. into the formulations of Montgomery et al. and Reardon, Jr. in order to enhance the UV curability.

Claims 1-20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grinevich et al., Ren et al. Patent No. 5,942,554 and Japanese Patent Nos. 1-16802, 4-45125 and 60-72961 in view of Montgomery et al. and Reardon, Jr.

13. Grinevich et al. is described hereinabove. Ren et al. is acknowledged on page 11, lines 9-23 of the specification as teaching the claimed opacifying component (col. 4) in a blend with from 60-99% by weight (col. 11, lines 10-13) of an epoxy monomer (col. 8, lines 16-46), from 0.1 to 15% by weight of such as an iodonium salt (col. 2, lines 48-60) and from 0 to 10% by weight of a thioxanthone photoinitiator (col. 10, lines 1-3 and 7).

14. Japanese '802 describes an adhesive composed of a cationic polymerizable compound such as 3,4-epoxycyclohexylmethyl-3',4'-epoxycyclohexanecarboxylate, 3,3-bis(1-octyl-2-methyl-1H-indol-3-yl)-1(3H)-isobenzofuranone (Chemical abstracts registry no. 50292-95-0, cited on page 11, lines 21-22 of the specification) and an iodonium salt (page 9 of the patent).

15. Japanese '125 is directed to a mixture of a cationic polymerizable organic compound such as an epoxy compound, an iodonium salt (page 220 of the patent) and crystal violet lactone (registry no. 1552-42-7, named on page 11, lines 11-12 of the specification).

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16. Japanese '961 is drawn to a photocurable coating of a silicon compound, an epoxy compound, crystal violet lactone and an organometallic compound.

17. The claimed adhesion promoter is not recited. It would have been obvious to add the adhesion promoter of Montgomery et al. and Reardon, Jr. into the formulations of Grinevich et al. and the Japanese patents in order "to enhance the adhesion of the cured composition to a substrate (Montgomery et al., page 3, paragraph 38).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. Bachmann et al. Patent No. 5,677,362 describes an acrylate encapsulant formulation with an adhesion promoter (col. 4, line 57 and col. 9, lines 46-48) and the elected species of isopropyl thioxanthone (col. 5, line 39) without the claimed opacifying component.

19. Canadian Patent No. 2,324,794 (page 3, lines 20-26) discloses a photocurable resin composition obtained from a photocurable component such as di(3,4-epoxycyclohexylmethyl) hexanedioate (page 4, line 19-20), a photoinitiator, a photoactivated color generating compound such as 6-[dimethylamino]-3,3-bis[4-dimethylamino]-phenyl-(3H)-isobenzofuranone (page 7, lines 18-19, crystal violet lactone) and a mixture of 2- and 4-isopropylthioxanthone (page 11, lines 23-24) use to prepare stereolithography layers.

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20. The Kaneko et al. and Ren et al. articles pertain to the activation of color change in crystal violet lactone by photocuring in the presence of iodonium salts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



Robert Sellers
Primary Examiner
Art Unit 1712